



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

J. P. KOTOWSKI, ET AL.

Application No. 10/067,441

Filed: February 4, 2002

For: **INTEGRATED CIRCUIT AND
METHOD FOR TESTING SAME
USING SINGLE PIN TO CONTROL
TEST MODE AND NORMAL MODE
OPERATION**

Group Art Unit: 2824

Examiner: JUNG H. HUR

**DECLARATION BY PAUL
WERKING IN SUPPORT OF
DECLARATION UNDER 37 CFR
1.131 TO OVERCOME CITED
PATENT**

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Attorney Docket: NSC1-G9800
[P05051]

Mail Stop Non-Fee Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

1. I, Paul Werking, am an employee of National Semiconductor Corporation ("NSC"), and have read the above-referenced application (the '441 application).

2. Kyle Fodchuk ("Kyle") is one of the two named inventors of the '441 application, and is an employee of NSC. During the year 2002, in the course of my duties for NSC, I worked with Kyle on the design of a low dropout ("LDO") voltage regulator integrated circuit that implements the invention of the '441 application (the "Invention").

3. NSC has manufactured and tested several prototypes of the LDO voltage regulator circuit. Two early integrated circuit prototypes of the LDO voltage regulator circuit embody the Invention, including one known to NSC personnel as the "Hobbs 2" circuit and a later one known to NSC personnel as the "Hobbs 3" circuit. The portion of the Hobbs 2 circuit that implements the Invention is known to NSC personnel as the "OnePin circuit." The portion of the Hobbs 3 circuit that implements the Invention is also known to NSC personnel as the "OnePin circuit."

4. During January 2002, including on January 8, 2002, and January 14, 2002, Kyle worked on the design of the Hobbs 2 circuit, including the design of its OnePin circuit, at NSC's facility in Grass Valley, California. Kyle and I attended a meeting on January 8, 2002, at which the design of the Hobbs 2 circuit (including its OnePin circuit) was discussed by NSC personnel. On January 14, 2002, Kyle's engineering group at NSC (to which I also belonged) submitted specifications for manufacturing the Hobbs 2 circuit to an NSC chip fabrication facility in Texas. On January 17, 2002, the layout for the Hobbs 2 circuit was placed on a reticle in accordance with these specifications. Using this reticle (during January 18, 2002 to February 19, 2002), the Hobbs 2 circuit and other integrated circuits were manufactured at the NSC chip fabrication facility in Texas on each wafer of a wafer lot known within NSC as the "Saturn35" wafer lot. On each wafer of the Saturn35 wafer lot, the die that embodies the Hobbs 2 circuit is referred to by NSC as the "S35V20HA1" die.

5. Attached Exhibit A is a copy of an e-mail message to me that I received from an NSC employee on January 18, 2002, documenting that the layout for the Hobbs 2 chip had been placed on a reticle as of January 17, 2002.

6. Attached Exhibit B is a diagram of a wafer of the Saturn35 wafer lot, showing the die (labeled "S35V20HA1") that embodies the Hobbs 2 circuit, and also showing other dies on the wafer. Attached Exhibit C is a listing of the dies on each wafer of the Saturn35 wafer lot.

7. During January 8, 2002, through February 4, 2002, Kyle worked diligently and reasonably continuously, at NSC's facility in Grass Valley, California, on the design of the OnePin circuit of the Hobbs 2 circuit and the design of an improved version of the OnePin circuit of the Hobbs 2 circuit. On February 5, 2002, Kyle and I (and other NSC personnel) attended a meeting at NSC's facility in Grass Valley, California, at which Kyle presented and discussed modifications to the OnePin circuit (of the Hobbs 2 chip) that he had designed and that he proposed for implementation in the OnePin circuit of the Hobbs 3 chip.

8. During February 2002, my engineering group at NSC received several of the

manufactured Hobbs 2 circuits, each packaged in a T0220 package. Also during February 2002, Kyle programmed five of the Hobbs circuits and the five programmed Hobbs 2 circuits were tested on an automatic tester at one of NSC's facilities in the U.S. Also during February 2002, Kyle and I performed and/or supervised additional testing of a number of the Hobbs 2 circuits.

9. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Executed on: June 11, 2003

By: Paul Werking
PAUL WERKING

EXHIBIT A

Exhibit A

Mary Anne Nigro
01/18/02 10:04 AM

To: James C Schmoock/Americas/NSC@NSC, Paul Werking/Americas/NSC@NSC
cc:
Subject: Saturn35 array

Jim and Paul,

FYI !!

Mary Anne

----- Forwarded by Mary Anne Nigro/Americas/NSC on 01/18/2002
10:06 AM -----

Peter Misich
01/18/2002 09:57 AM

To: Scott D Carper/Americas/NSC@NSC, Keith B Schoendoerfer/Americas/NSC@NSC,
Mary Anne Nigro/Americas/NSC@NSC, Raj Singh/Contractor/Americas/NSC@NSC, Mark J
Mercer/Americas/NSC@NSC, Richard Marks/Americas/NSC@NSC, Paul
Reyes/Americas/NSC@NSC
cc: Thuan Duong/Americas/NSC@NSC, Kenneth Chong/Americas/NSC@NSC

Subject: Saturn35 array

Hello all,
The Saturn35 reticle array map and die list are ready for your review.
Rgds,
Peter

----- Forwarded by Peter Misich/Americas/NSC on 01/18/2002
09:46 AM -----

Thuan Duong
01/17/2002 06:14 PM
To: Peter Misich/Americas/NSC@NSC
cc: Thuan Duong/Americas/NSC

Subject: Saturn35 array

Hi Peter,
Here are saturn35 array and device diesizes, pls, review.
Thanks,
Thuan

EXHIBIT B

S35LM3819A8	S35LM3819C1	S35LM3819B1	TSAT3502	TSAT3502	S35PM2LMV1	S35PMB2LMV1
S35LM3819A8	S35LM3819C1	S35LM3819B1	TSAT3502	TSAT3502		
S35EMP1REA1	S35EMP1REA1	S35EMP1REA1	TSAT3503	TSAT3503	S35PM2LMV1	S35PMB2LMV1
S35G29651N3	S35G29651N5	S35G29651P3	TSAT3504	TSAT3504	S35PM2LMV1	S35PMB2LMV1
S35PS02LMV1	S35PS02LMV1	S35PS02LMV1	TSAT3503	TSAT3503	S35G29651N3	S35G29651N3
S35PLW2LMV1	S35PLW2LMV1	S35PLW2LMV1	TSAT3503	TSAT3503	S35G29651P3	S35G29651P3
S35PLW2LMV1	S35PLW2LMV1	S35PLW2LMV1	TSAT3503	TSAT3503	S35G29651N5	S35G29651N5
					S35G29651P5	S35G29651P5

SATURN35.DIESIZE

DEVICE NAME	REQUESTOR	#	PHONE	XFW-+	XFW-+	SC	XSZ-4	YSZ-4	XFINAL	YFINAL	Proc.
1 S35PM2LMV1	S.CARPER	3	16395	991.0	859.0	0.72	713.16	618.12	1426.3	1236.2	sgvr2
2 S35PLV2LMV1	S.CARPER	3	16395	991.0	859.0	0.72	713.16	618.12	1426.3	1236.2	sgvr2
3 S35PSD2LMV1	S.CARPER	3	16395	991.0	859.0	0.72	713.16	618.12	1426.3	1236.2	sgvr2
4 S35PMD2LMV1	S.CARPER	3	16395	991.0	859.0	0.72	713.16	618.12	1426.3	1236.2	sgvr2
5 S35G29651P5	K.SCHOENDOERFER	2	82746556	899.0	511.0	0.72	646.92	367.56	1293.8	735.1	sg2
6 S35G29651N5	K.SCHOENDOERFER	3	82746556	899.0	511.0	0.72	646.92	367.56	1293.8	735.1	sg2
7 S35G29651N3	K.SCHOENDOERFER	3	82746556	899.0	511.0	0.72	646.92	367.56	1293.8	735.1	sg2
8 S35G29651P3	K.SCHOENDOERFER	3	82746556	899.0	511.0	0.72	646.92	367.56	1293.8	735.1	sg2
9 S35LM3819C1	K.SCHOENDOERFER	2	82746556	1446.0	1093.0	0.72	1040.76	786.60	2081.5	1573.2	sg3
10 S35LM3819B1	K.SCHOENDOERFER	2	82746556	1446.0	1093.0	0.72	1040.76	786.60	2081.5	1573.2	sg3
11 S35LM3819A8	K.SCHOENDOERFER	2	82746556	1446.0	1093.0	0.72	1040.76	786.60	2081.5	1573.2	sg3
12 S35EMPIREA1	M.NIGRO	3	82743076	1469.0	1060.0	0.72	1057.32	762.84	2114.6	1525.7	sg2
13 S35V20HA1	M.NIGRO	2	82743076	1704.0	1062.0	0.72	1226.52	764.28	2453.0	1528.6	sg2
14 S35LM9843A	R.SINGH	3	12738	968.0	968.0	0.72	696.60	696.60	1422.4	1422.4	sp2
15 S35LM4879A	R.SINGH	3	12738	968.0	968.0	0.72	696.60	696.60	1422.4	1422.4	sp2
16 TSAT3501	M.MERCER	4	87512382	797.0	656.0	0.72	573.48	471.96	1147.0	943.9	sg2
17 TSAT3502	R.MARKS	4	87512382	825.0	589.0	0.72	593.64	423.72	1187.3	847.4	sgvr3
18 TSAT3503	P.REYES	4	87512382	1367.0	774.0	0.72	983.88	556.92	1967.8	1113.8	sgvr3
19 TSAT3504	R.MARKS	3	87512382	825.0	589.0	0.72	593.64	423.72	1187.3	847.4	sgvr3

Note: process s2 = cs65s-2lm, sg2 = cs65sg-2lm, sg3 = cs65sg-3lm, sp2 = cs65sp-2lm, sp3 = cs65sp-3lm.

= number of die on reticle.